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(54) Title: A GENE DIFFERENTIALLY EXPRESSED IN BREAST AND BLADDER CANCER AND ENCODED POLYPEPTIDES

## Protein Sequence

MSGEPGQTSVAPPPEEVEPGSGVRIWVEYCEPGFEATYLEL  
ASAVKEQYPGIEIESRLGGTGAFIEINGQLVFSKLENGGFPY  
EKDLIEAIRRASNGETLEKITNSRPPCVIL\*

(57) Abstract: The present invention relates to a novel human gene that is differentially expressed in human carcinoma. More specifically, the present invention relates to a polynucleotide encoding a novel human polypeptide named C35 that is overexpressed in human breast and bladder carcinoma. This invention also relates to C35 polypeptides, as

well as vectors, host cells, antibodies directed to C35 polypeptides, and the recombinant methods for producing the same. The present invention further relates to diagnostic methods for detecting carcinomas, including human breast carcinomas. The invention further relates to the formulation and use of the C35 gene and polypeptides in immunogenic compositions, invention to induce antibody or cell-mediated immunity against target cells, such as tumor cells, that express the C35 gene. The invention further relates to screening methods for identifying agonists and antagonists of C35 activity.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/10855

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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WO 0140269	A	07-06-2001	WO 0140269 A2	07-06-2001

# INTERNATIONAL SEARCH REPORT

national Application No

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 C12N5/10 C07K16/30 G01N33/50  
A61K38/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K C12N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal, SEQUENCE SEARCH, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	<p>DATABASE EMBL SEQUENCE LIBRARY [Online] 31 January 2000 (2000-01-31) MIH-MGC:: "dq03f02.x1 NIH MGC 2 Homo sapiens cDNA clone IMAGE:2846738 5', mRNA - "National Institutes of Health, Mammalian Gene Collection (MGC)" XP002177407 accession no.AW327450</p>	1-4,11, 21,24
A	<p>SAHASRABUDHE DEEPAK M ET AL: "Shared T cell-defined antigens on independently derived tumors." JOURNAL OF IMMUNOLOGY, vol. 151, no. 11, 1993, pages 6302-6310, XP002177406 ISSN: 0022-1767 cited in the application</p>	

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance  
 "E" earlier document but published on or after the international filing date  
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
 "O" document referring to an oral disclosure, use, exhibition or other means  
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  
 "&" document member of the same patent family

Date of the actual completion of the international search

17 September 2001

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27.09. 01

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/10855

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 33869 A (CORIXA CORP) 8 July 1999 (1999-07-08) the whole document ---	
A	WO 99 37775 A (GENQUEST INC) 29 July 1999 (1999-07-29) the whole document ---	
P,X	WO 00 55173 A (HUMAN GENOME SCIENCES INC ;ROSEN CRAIG A (US); RUBEN STEVEN M (US)) 21 September 2000 (2000-09-21) pages 1-12, page 30, pages 70-75, 148-163, 177-410, SEQID124; page 226; page 154; claims ---	1-37
P,X	WO 00 55350 A (HUMAN GENOME SCIENCES INC ;ROSEN CRAIG A (US); RUBEN STEVEN M (US)) 21 September 2000 (2000-09-21) page 260 , SEQID966, claims, the document in general ---	11-17, 19,20, 25-37
E	WO 01 40269 A (CORIXA CORP ;DAY CRAIG H (US); JIANG YUQIU (US); DILLON DAVIN C (U) 7 June 2001 (2001-06-07)  SEQID103, page 9, -----	1-4, 7-11,13, 14,21, 24-37

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/10855

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claim 18 as far as it relates to a method on the entire body and claims 26,27 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Although claims 17, 30-37 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.